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In The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1.-3. (Cancelled)

- 4. (Withdrawn) An implantable medical device according to claim 2, wherein the medical unit comprises one of: a pacemaker lead, a defibrillation lead, a neurological stimulation lead, a combination pacing and defibrillation lead, an artificial heart valve.
- 5. (Withdrawn) An implantable medical device according to claim 2, wherein the base polymer is selected from the group consisting of polyurethanes, polyurethane copolymers, epoxies, fluoropolymers, polyolefins and silicone rubbers.
- 6. (Withdrawn) An implantable medical device according to claim 2, wherein the medical unit further comprises a shell having an outer surface, and the casing is formed on at least a portion of the outer surface of the shell.
- 7. (New) An implantable cardiac stimulation device, comprising:

an atrial sensing circuit;

an atrial pacing circuit; and

a control circuit comprising:

means for determining a time interval between sensed atrial depolarizations of a first cardiac cycle;

means for establishing a loss of capture window during a second cardiac cycle, the loss of capture window including a negative sensing interval within a reference A-A time interval corresponding to the time interval determined for the first cardiac cycle, wherein the negative sensing interval ends coincident

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with the end of the reference A-A time interval, and a positive sensing interval of approximately the same duration as the negative sensing interval, wherein the positive sensing interval begins coincident with the end of the reference A-A time interval;

means for causing the atrial pacing circuit to deliver an atrial test pulse of a predetermined energy during the second cardiac cycle, the test pulse being delivered within the reference A-A time interval and prior to the negative sensing interval;

means for determining whether a next sensed atrial depolarization that immediately follows the atrial test pulse occurs within the loss of capture window; and

means for determining whether the atrial test pulse energy is above or below a capture threshold based upon a determination as to whether the next sensed atrial depolarization occurred within the loss of capture window.

- 8. (New) The device of claim 7, wherein the control circuit further comprises:
 means for causing the atrial pacing circuit to deliver another atrial test
 pulse of an increased predetermined energy during a third cardiac cycle and
 within the reference A-A interval if the next sensed atrial depolarization occurred
 within the loss of capture window.
- 9. (New) The device of claim 8, wherein the control circuit further comprises: means for conducting three consecutive test cycles wherein each test cycle is constituted by the atrial pacing circuit delivering an atrial test pulse of a predetermined energy during each of three consecutive cardiac cycles and within a reference A-A interval and the means for determining whether the atrial test pulse energy is above or below a capture threshold; and

means for determining an existence of a stable atrial capture based upon at least two of the three atrial test pulses being above the capture threshold.

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10. (New) The device of claim 9, wherein the control circuit further comprises: means for calculating a pacing pulse energy safety margin; and means for causing the atrial pacing circuit to deliver stimulation pulses at an energy level of the above threshold atrial test pulse plus the pacing pulse energy safety margin.